

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002828**Date Inspected:** 07-Jun-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Chen Xi**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

Caltrans Quality Assurance Inspector (QAI) Bruce Berger arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions. While on site the QAI observed and/or discovered the following.

BAY 1

The Caltrans QAI observed welding utilizing the dual process WPS-B-T-2342-U1 (U-rib)-3 welding procedure specification (WPS) for closed rib welding of the Production Monitoring Test (PMT) #1 for Production Panel DP6556-001 and DP591-001 on closed U-rib Partial Joint Penetration (PJP) welds in Bay #1. ZPMC welding personnel performed Gantry Machine, Gas Metal Arc Welding (GMAW) for the root pass and immediately performed Gantry Machine, Submerged Arc Welding (SAW) for the cover/final pass on PMT #1, using gantry machine #1. Upon completion of the SAW pass on U-rib PJP welds on PMT #1 Visual Testing (VT) was performed on weld #1 through #6 by ZPMC personnel and was accepted then VT was verified by the Caltrans QAI. Ultrasonic Testing (UT) was then performed by ZPMC inspector and PMT #1 was determined to be acceptable. Macro etch samples were selected by the Caltrans QAI on PMT #1. The 500mm site selected by ZPMC for visual and ultrasonic testing and the area for selection of the Macros was 30mm short of the end of the welds. Macro's were looked at by ZPMC, ABF and MET's at 1115 and appeared to be in compliance with the code and specification.

This QAI observed the GMAW root welding of Deck Panel DP556-001 on gantry 1. Welders and essential welding variables are shown below. There were two areas on the root welds which will require weld repair prior

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to welding the SAW cover passes.

On Deck Panel DP591-001 ZPMC QC performed magnetic particle testing 100% of the tack welds and found a number of tack welds which did not appear satisfactory. Repairs are going to be carried out and welding of the roots and covers should take place late in the afternoon.



Item	Weld Identification	Applicable WPS	CWI Name	Amperage	Voltage	TravelSpeed	Preheat Temp	Remarks
1	DP556-001-001	WPS-B-T-2342-U1	Chen Xi	377	29.9	526mm/min	25C	Welder 059468 GMAW Root
2	DP556-001-010	WPS-B-T-2342-U1	Chen Xi	370	30.4	526mm/min	25C	Welder 059403 GMAW Root
3	DP556-001-009	WPS-B-T-2342-U1	Chen Xi	363	30.8	526mm/min	25C	Welder 062265 GMAW Root
4	DP556-001-008	WPS-B-T-2342-U1	Chen Xi	378	29.9	526mm/min	25C	Welder 059361 GMAW Root
5	DP556-001-007	WPS-B-T-2342-U1	Chen Xi	369	30.3	526mm/min	25C	Welder 062265 GMAW Root
6	DP556-001-006	WPS-B-T-2342-U1	Chen Xi	371	30.4	526mm/min	25C	Welder 059361 GMAW Root
7	DP556-001-005	WPS-B-T-2342-U1	Chen Xi	363	30.7	526mm/min	25C	Welder 059378 GMAW Root
8	DP556-001-004	WPS-B-T-2342-U1	Chen Xi	377	29.9	526mm/min	25C	Welder 059416 GMAW Root
9	DP556-001-003	WPS-B-T-2342-U1	Chen Xi	378	29.9	526mm/min	25C	Welder 059378 GMAW Root
10	DP556-001-002	WPS-B-T-2342-U1	Chen Xi	363	30.8	526mm/min	25C	Welder 059416 GMAW Root

Summary of Conversations:

No conversations held today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or

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remedial efforts please contact Patrick Lowery 858 344-2712, who represents the Office of Structural Materials for your project.

Inspected By:	Berger, Bruce	Quality Assurance Inspector
Reviewed By:	Cochran, Jim	QA Reviewer
